

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
SEQUENCE LISTING**10/591419**

&lt;110&gt; Bayer CropScience GmbH

<120> Methods for identifying proteins with starch phosphorylating  
enzymatic activity

&lt;130&gt; BCS 04-5001-PCT

&lt;150&gt; EP04090483.1

&lt;151&gt; 2004-12-15

&lt;150&gt; EP04090121.7

&lt;151&gt; 2004-03-29

&lt;150&gt; EP04090087.0

&lt;151&gt; 2004-03-05

&lt;150&gt; US60/549,980 provisional

&lt;151&gt; 2004-03-05

&lt;160&gt; 26

&lt;170&gt; PatentIn version 3.1

&lt;210&gt; 1

&lt;211&gt; 3591

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(3591)

&lt;223&gt;

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aga gtt aat ctc agc cac caa tct cac cga ctc aga aac tcc aat tct Arg Val Asn Leu Ser His Gln Ser His Arg Leu Arg Asn Ser Asn Ser	144
cgt ctc act tgc act gct act tct tct tcc acc att gag gaa caa cgg Arg Leu Thr Cys Thr Ala Thr Ser Ser Ser Thr Ile 60 Glu Glu Gln Arg	192
aag aag aaa gat gga tca gga acg aaa gtg agg ttg aat gtg agg tta Lys Lys Lys Asp Gly Ser Gly Thr Lys Val Arg Leu Asn Val Arg Leu 80	240
gat cat caa gtt aat ttt ggt gac cat gtg gct atg ttt gga tca gct Asp His Gln Val Asn 85 Phe Gly Asp His Val 90 Ala Met Phe Gly Ser 95 Ala	288
aaa gag att ggt tca tgg aaa aag aaa tcg cct ttg aat tgg agt gag Lys Glu Ile Gly 100 Ser Trp Lys Lys 105 Ser Pro Leu Asn Trp 110 Ser Glu	336
aat gga tgg gtt tgt gag ttg gaa ctt gac ggt ggt cag gtt ttg gag Asn Gly Trp 115 Val Cys Glu Leu Glu 120 Asp Gly Gly Gln 125 Val Leu Glu	384
tat aag ttt gtc att gtt aag aat gat ggt tca ctt tca tgg gaa tct Tyr Lys Phe Val Ile Val Lys 135 Asn Asp Gly Ser Leu 140 Ser Trp Glu Ser	432
ggt gat aat cgt gtc ctt aag gtt cca aat tct ggg aat ttt tct gtt Gly Asp Asn Arg Val Leu Lys Val Pro Asn Ser 155 Asn Phe Ser Val 160	480
ggt tgt cat tgg gat gct act aga gaa acc ctt gat ttg cct cag gag Val Cys His Trp Asp Ala Thr Arg Glu Thr 170 Leu Asp Leu Pro Gln Glu 175	528
ggt ggt aat gat gat gat gtt ggt gat ggt ggg cat gag agg gat aat Val Gly Asn Asp Asp Asp Val Gly Asp Gly His Glu Arg 190 Asp Asn	576
cat gat gtt ggt gat gat aga gta gtg gga agt gaa aat ggt gcg cag His Asp Val 195 Gly Asp Asp Arg Val 200 Val Gly Ser Glu Asn 205 Gly Ala Gln	624
ctt cag aag agt aca ttg ggt ggg caa tgg caa ggt aaa gat gcg tcc Leu Gln Lys Ser Thr Leu Gly 215 Gln Trp Gln Gly 220 Lys Asp Ala Ser	672
ttt atg cgt tct aat gat cat ggt aac aga gaa gtt ggt aga aat tgg Phe Met Arg Ser Asn Asp His Gly Asn Arg Glu Val Gly Arg Asn Trp 240	720
gat act agt ggt ctt gaa ggc aca gct ctt aag atg gtt gag ggt gat Asp Thr Ser Gly Leu 245 Glu Gly Thr Ala Leu 250 Lys Met Val Glu Gly 255 Asp	768
cgc aac tct aag aac tgg tgg aga aag ctt gaa atg gta cgc gag gtt Arg Asn Ser Lys Asn Trp Trp Arg Lys Leu Glu Met Val Arg Glu Val	816

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260 265 270

ata gtt ggg agt gtt gag agg gag gaa cga ttg aag gcg ctc ata tac Ile Val Gly Ser Val Glu Arg Glu Glu Arg Leu Lys Ala Leu Ile Tyr 275 280 285	864
tct gca att tat ttg aag tgg ata aac aca ggt cag att cct tgt ttt Ser Ala Ile Tyr Leu Lys Trp Ile Asn Thr Gly Gln Ile Pro Cys Phe 290 295 300	912
gaa gat gga ggg cat cac cgt cca aac agg cat gcc gag att tcc aga Glu Asp Gly Gly His His Arg Pro Asn Arg His Ala Glu Ile Ser Arg 305 310 315 320	960
ctt ata ttc cgt gag ttg gag cac att tgc agt aag aaa gat gct act Leu Ile Phe Arg Glu Leu Glu His Ile Cys Ser Lys Lys Asp Ala Thr 325 330 335	1008
cca gag gaa gtg ctt gtt gct cgg aaa atc cat ccg tgt tta cct tct Pro Glu Glu Val Leu Val Ala Arg Lys Ile His Pro Cys Leu Pro Ser 340 345 350	1056
ttc aaa gca gag ttt act gca gct gtc cct cta act cgg att agg gac Phe Lys Ala Glu Phe Thr Ala Ala Val Pro Leu Thr Arg Ile Arg Asp 355 360 365	1104
ata gcc cat cgg aat gat att cct cat gat ctc aag caa gaa atc aag Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys 370 375 380	1152
cat acg ata caa aat aag ctt cac cgg aat gct ggt cca gaa gat cta His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu 385 390 395 400	1200
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tat agt gga gac ttt gtg gag cag ttt aaa ata ttc cat aat gag ctt Tyr Ser Gly Asp Phe Val Glu Gln Phe Lys Ile Phe His Asn Glu Leu 420 425 430	1296
aaa gat ttc ttt aat gct gga agt ctc act gaa cag ctt gat tct atg Lys Asp Phe Phe Asn Ala Gly Ser Leu Thr Glu Gln Leu Asp Ser Met 435 440 445	1344
aaa att tct atg gat gat aga ggt ctt tct gcg ctc aat ttg ttt ttt Lys Ile Ser Met Asp Asp Arg Gly Leu Ser Ala Leu Asn Leu Phe Phe 450 455 460	1392
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gag ttg att aaa acc atg cat tct cta gct tct tta aga gaa aca att Glu Leu Ile Lys Thr Met His Ser Leu Ala Ser Leu Arg Glu Thr Ile 485 490 495	1488
ata aag gaa ctt aat agc ggc ttg cga aat gat gct cct gat act gcc Ile Lys Glu Leu Asn Ser Gly Leu Arg Asn Asp Ala Pro Asp Thr Ala 500 505 510	1536
att gca atg cgc cag aag tgg cgc ctt tgt gag atc ggc ctc gag gac Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gly Leu Glu Asp 515 520 525	1584
tac ttt ttt gtt cta cta agc aga ttc ctc aat gct ctt gaa act atg Tyr Phe Phe Val Leu Leu Ser Arg Phe Leu Asn Ala Leu Glu Thr Met 530 535 540	1632

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 530 535 540

gga Gly 545	gga Gly	gct Ala	gat Asp	caa Gln	ctg Leu 550	gca Ala	aaa Lys	gat Asp	gtg Val	gga Gly 555	tca Ser	aga Arg	aac Asn	gtt Val	gcc Ala 560	1680
tca Ser	tgg Trp	aat Asn	gat Asp	cca Pro 565	cta Leu	gat Asp	gct Ala	ttg Leu	gtg Val 570	ttg Leu	ggt Gly	gtt Val	cac His	caa Gln 575	gta Val	1728
ggt Gly	cta Leu	tct Ser	ggt Gly 580	tgg Trp	aag Lys	caa Gln	gaa Glu	gaa Glu 585	tgt Cys	tta Leu	gcc Ala	att Ile	gga Gly 590	aat Asn	gaa Glu	1776
ctc Leu	ctt Leu	gct Ala 595	tgg Trp	cga Arg	gaa Glu	agg Arg	gac Asp 600	cta Leu	ctt Leu	gaa Glu	aaa Lys	gaa Glu 605	ggg Gly	gaa Glu	gag Glu	1824
gat Asp	gga Gly 610	aaa Lys	aca Thr	att Ile	tgg Trp	gcc Ala 615	atg Met	agg Arg	ctg Leu	aaa Lys	gca Ala 620	act Thr	ctt Leu	gat Asp	cga Arg	1872
gca Ala 625	cgc Arg	aga Arg	tta Leu	aca Thr	gca Ala 630	gaa Glu	tat Tyr	tct Ser	gat Asp	ttg Leu 635	ctt Leu	ctt Leu	caa Gln	ata Ile	ttt Phe 640	1920
cct Pro	cct Pro	aat Asn	gtg Val	gag Glu 645	att Ile	tta Leu	gga Gly	aaa Lys	gct Ala 650	cta Leu	gga Gly	att Ile	cca Pro	gag Glu 655	aat Asn	1968
agt Ser	gtc Val	aag Lys	acc Thr 660	tat Tyr	aca Thr	gaa Glu	gca Ala	gag Glu 665	att Ile	cgt Arg	gct Ala	gga Gly	att Ile 670	att Ile	ttc Phe	2016
cag Gln	atc Ile	tca Ser 675	aag Lys	ctc Leu	tgc Cys	act Thr	gtt Val 680	ctt Leu	cta Leu	aaa Lys	gct Ala	gta Val 685	aga Arg	aat Asn	tca Ser	2064
ctt Leu	ggt Gly 690	tct Ser	gag Glu	ggc Gly	tgg Trp	gat Asp 695	gtc Val	gtt Val	gta Val	cct Pro	gga Gly 700	tgc Ser	acg Thr	tct Ser	ggg Gly	2112
aca Thr 705	tta Leu	gtt Val	cag Gln	gtt Val 710	gag Glu	agc Ser	att Ile	gtt Val	ccg Pro	gga Gly 715	tca Ser	ttg Leu	cca Pro	gca Ala	act Thr 720	2160
tct Ser	ggt Gly	ggt Gly	cct Pro	att Ile 725	att Ile	ctc Leu	ttg Leu	gtc Val	aat Asn 730	aaa Lys	gct Ala	gat Asp	ggc Gly	gat Asp 735	gaa Glu	2208
gag Glu	gta Val	agt Ser	gct Ala 740	gct Ala	aat Asn	ggg Gly	aac Asn	ata Ile 745	gct Ala	gga Gly	gtc Val	atg Met	ctt Leu 750	ctg Leu	cag Gln	2256
gag Glu	ctg Leu	cct Pro 755	cac His	ttg Leu	tct Ser	cac His	ctt Leu 760	ggc Gly	gtt Val	aga Arg	gcg Ala	cgg Arg 765	cag Gln	gag Glu	aaa Lys	2304
att Ile 770	gtc Val	ttt Phe	gtg Val	aca Thr	tgt Cys	gat Asp 775	gat Asp	gat Asp	gac Asp	aag Lys	gtt Val 780	gct Ala	gat Asp	ata Ile	cga Arg	2352
cga Arg 785	ctt Leu	gtg Val	gga Gly	aaa Lys	ttt Phe 790	gtg Val	agg Arg	ttg Leu	gaa Glu	gca Ala 795	tct Ser	cca Pro	agt Ser	cat His	gtg Val 800	2400
aat Asn	ctg Leu	ata Ile	ctt Leu	tca Ser	act Thr	gag Glu	ggt Gly	agg Arg	agt Ser	cgc Arg	act Thr	tcc Ser	aaa Lys	tcc Ser	agt Ser	2448

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gcg acc aaa aaa acg gat aag aac agc tta tct aag aaa aaa aca gat	2496
Ala Thr Lys Lys Thr Asp Lys Asn Ser Leu Ser Lys Lys Lys Thr Asp	
820 825 830	
aag aag agc tta tct atc gat gat gaa gaa tca aag cct ggt tcc tca	2544
Lys Lys Ser Leu Ser Ile Asp Asp Glu Glu Ser Lys Pro Gly Ser Ser	
835 840 845	
tct tcc aat agc ctc ctt tac tct tcc aag gat atc cct agt gga gga	2592
Ser Ser Asn Ser Leu Leu Tyr Ser Ser Lys Asp Ile Pro Ser Gly Gly	
850 855 860	
atc ata gca ctt gct gat gca gat gta cca act tct ggt tca aaa tct	2640
Ile Ile Ala Leu Ala Asp Ala Asp Val Pro Thr Ser Gly Ser Lys Ser	
865 870 875 880	
gct gca tgt ggt ctt ctt gca tct tta gca gaa gcc tct agt aaa gtg	2688
Ala Ala Cys Gly Leu Leu Ala Ser Leu Ala Glu Ala Ser Ser Lys Val	
885 890 895	
cac agc gaa cac gga gtt ccg gca tca ttt aag gtt cca act gga gtt	2736
His Ser Glu His Gly Val Pro Ala Ser Phe Lys Val Pro Thr Gly Val	
900 905 910	
gtc ata cct ttt gga tcg atg gaa tta gct tta aag caa aat aat tcg	2784
Val Ile Pro Phe Gly Ser Met Glu Leu Ala Leu Lys Gln Asn Asn Ser	
915 920 925	
gaa gaa aag ttt gcg tct ttg cta gaa aaa cta gaa acc gcc aga cct	2832
Glu Glu Lys Phe Ala Ser Leu Leu Glu Lys Leu Glu Thr Ala Arg Pro	
930 935 940	
gag ggt ggt gag cta gac gac ata tgt gac cag atc cat gaa gtg atg	2880
Glu Gly Gly Glu Leu Asp Asp Ile Cys Asp Gln Ile His Glu Val Met	
945 950 955 960	
aaa acg ttg caa gtg cct aaa gaa aca atc aac agc ata agc aaa gcg	2928
Lys Thr Leu Gln Val Pro Lys Glu Thr Ile Asn Ser Ile Ser Lys Ala	
965 970 975	
ttt ctc aaa gat gct cgt ctc att gtt cgt tca agt gct aac gtc gag	2976
Phe Leu Lys Asp Ala Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu	
980 985 990	
gac tta gcc gga atg tca gct gca gga ctc tat gaa tca atc cct aac	3024
Asp Leu Ala Gly Met Ser Ala Ala Gly Leu Tyr Glu Ser Ile Pro Asn	
995 1000 1005	
gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa	3069
Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln	
1010 1015 1020	
gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga	3114
Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg	
1025 1030 1035	
gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt	3159
Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val	
1040 1045 1050	
caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg	3204
Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val	
1055 1060 1065	
agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag atc gct	3249
Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala	

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1070 1075 1080

cct ggt tta ggt gag act tta gct tca gga aca aga gga aca cca	3294
Pro Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro	
1085 1090 1095	
tgg aga ctc gct tcg ggt aag ctc gac ggg att gta caa acc tta	3339
Trp Arg Leu Ala Ser Gly Lys Leu Asp Gly Ile Val Gln Thr Leu	
1100 1105 1110	
gct ttc gca aac ttc agc gaa gag ctt ctt gtg tca gga aca ggt	3384
Ala Phe Ala Asn Phe Ser Glu Glu Leu Leu Val Ser Gly Thr Gly	
1115 1120 1125	
cct gct gat gga aaa tac gtt cgg ttg acc gtg gac tat agc aaa	3429
Pro Ala Asp Gly Lys Tyr Val Arg Leu Thr Val Asp Tyr Ser Lys	
1130 1135 1140	
aaa cgt tta act gtt gac tcg gtg ttt aga cag cag ctc ggt cag	3474
Lys Arg Leu Thr Val Asp Ser Val Phe Arg Gln Gln Leu Gly Gln	
1145 1150 1155	
aga ctc ggt tcg gtt ggt ttc ttc ttg gaa aga aac ttt ggc tgt	3519
Arg Leu Gly Ser Val Gly Phe Phe Leu Glu Arg Asn Phe Gly Cys	
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gct caa gac gtt gaa ggt tgt ttg gtt ggt gaa gat gtt tac att	3564
Ala Gln Asp Val Glu Gly Cys Leu Val Gly Glu Asp Val Tyr Ile	
1175 1180 1185	
ggt cag tca agg cca caa cct ctg tag	3591
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<213> Arabidopsis thaliana

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Arg Val Asn Leu Ser His Gln Ser His Arg Leu Arg Asn Ser Asn Ser  
35 40 45

Arg Leu Thr Cys Thr Ala Thr Ser Ser Ser Thr Ile Glu Glu Gln Arg  
50 55 60

Lys Lys Lys Asp Gly Ser Gly Thr Lys Val Arg Leu Asn Val Arg Leu  
65 70 75 80

Asp His Gln Val Asn Phe Gly Asp His Val Ala Met Phe Gly Ser Ala

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Lys Glu Ile Gly Ser Trp Lys Lys Lys Ser Pro Leu Asn Trp Ser Glu  
 100 105 110  
 Asn Gly Trp Val Cys Glu Leu Glu Leu Asp Gly Gly Gln Val Leu Glu  
 115 120 125  
 Tyr Lys Phe Val Ile Val Lys Asn Asp Gly Ser Leu Ser Trp Glu Ser  
 130 135 140  
 Gly Asp Asn Arg Val Leu Lys Val Pro Asn Ser Gly Asn Phe Ser Val  
 145 150 155 160  
 Val Cys His Trp Asp Ala Thr Arg Glu Thr Leu Asp Leu Pro Gln Glu  
 165 170 175  
 Val Gly Asn Asp Asp Asp Val Gly Asp Gly Gly His Glu Arg Asp Asn  
 180 185 190  
 His Asp Val Gly Asp Asp Arg Val Val Gly Ser Glu Asn Gly Ala Gln  
 195 200 205  
 Leu Gln Lys Ser Thr Leu Gly Gly Gln Trp Gln Gly Lys Asp Ala Ser  
 210 215 220  
 Phe Met Arg Ser Asn Asp His Gly Asn Arg Glu Val Gly Arg Asn Trp  
 225 230 235 240  
 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp  
 245 250 255  
 Arg Asn Ser Lys Asn Trp Trp Arg Lys Leu Glu Met Val Arg Glu Val  
 260 265 270  
 Ile Val Gly Ser Val Glu Arg Glu Glu Arg Leu Lys Ala Leu Ile Tyr  
 275 280 285  
 Ser Ala Ile Tyr Leu Lys Trp Ile Asn Thr Gly Gln Ile Pro Cys Phe  
 290 295 300  
 Glu Asp Gly Gly His His Arg Pro Asn Arg His Ala Glu Ile Ser Arg  
 305 310 315 320  
 Leu Ile Phe Arg Glu Leu Glu His Ile Cys Ser Lys Lys Asp Ala Thr  
 325 330 335  
 Pro Glu Glu Val Leu Val Ala Arg Lys Ile His Pro Cys Leu Pro Ser  
 340 345 350  
 Phe Lys Ala Glu Phe Thr Ala Ala Val Pro Leu Thr Arg Ile Arg Asp

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys  
 370 375 380

His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu  
 385 390 395 400

Ile Ala Thr Glu Ala Met Leu Gln Arg Ile Thr Glu Thr Pro Gly Lys  
 405 410 415

Tyr Ser Gly Asp Phe Val Glu Gln Phe Lys Ile Phe His Asn Glu Leu  
 420 425 430

Lys Asp Phe Phe Asn Ala Gly Ser Leu Thr Glu Gln Leu Asp Ser Met  
 435 440 445

Lys Ile Ser Met Asp Asp Arg Gly Leu Ser Ala Leu Asn Leu Phe Phe  
 450 455 460

Glu Cys Lys Lys Arg Leu Asp Thr Ser Gly Glu Ser Ser Asn Val Leu  
 465 470 475 480

Glu Leu Ile Lys Thr Met His Ser Leu Ala Ser Leu Arg Glu Thr Ile  
 485 490 495

Ile Lys Glu Leu Asn Ser Gly Leu Arg Asn Asp Ala Pro Asp Thr Ala  
 500 505 510

Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gly Leu Glu Asp  
 515 520 525

Tyr Phe Phe Val Leu Leu Ser Arg Phe Leu Asn Ala Leu Glu Thr Met  
 530 535 540

Gly Gly Ala Asp Gln Leu Ala Lys Asp Val Gly Ser Arg Asn Val Ala  
 545 550 555 560

Ser Trp Asn Asp Pro Leu Asp Ala Leu Val Leu Gly Val His Gln Val  
 565 570 575

Gly Leu Ser Gly Trp Lys Gln Glu Glu Cys Leu Ala Ile Gly Asn Glu  
 580 585 590

Leu Leu Ala Trp Arg Glu Arg Asp Leu Leu Glu Lys Glu Gly Glu Glu  
 595 600 605

Asp Gly Lys Thr Ile Trp Ala Met Arg Leu Lys Ala Thr Leu Asp Arg  
 610 615 620

Ala Arg Arg Leu Thr Ala Glu Tyr Ser Asp Leu Leu Leu Gln Ile Phe



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 625 630 635 640

Pro Pro Asn Val Glu Ile Leu Gly Lys Ala Leu Gly Ile Pro Glu Asn  
 645 650 655

Ser Val Lys Thr Tyr Thr Glu Ala Glu Ile Arg Ala Gly Ile Ile Phe  
 660 665 670

Gln Ile Ser Lys Leu Cys Thr Val Leu Leu Lys Ala Val Arg Asn Ser  
 675 680 685

Leu Gly Ser Glu Gly Trp Asp Val Val Val Pro Gly Ser Thr Ser Gly  
 690 695 700

Thr Leu Val Gln Val Glu Ser Ile Val Pro Gly Ser Leu Pro Ala Thr  
 705 710 715 720

Ser Gly Gly Pro Ile Ile Leu Leu Val Asn Lys Ala Asp Gly Asp Glu  
 725 730 735

Glu Val Ser Ala Ala Asn Gly Asn Ile Ala Gly Val Met Leu Leu Gln  
 740 745 750

Glu Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg Gln Glu Lys  
 755 760 765

Ile Val Phe Val Thr Cys Asp Asp Asp Asp Lys Val Ala Asp Ile Arg  
 770 775 780

Arg Leu Val Gly Lys Phe Val Arg Leu Glu Ala Ser Pro Ser His Val  
 785 790 795 800

Asn Leu Ile Leu Ser Thr Glu Gly Arg Ser Arg Thr Ser Lys Ser Ser  
 805 810 815

Ala Thr Lys Lys Thr Asp Lys Asn Ser Leu Ser Lys Lys Lys Thr Asp  
 820 825 830

Lys Lys Ser Leu Ser Ile Asp Asp Glu Glu Ser Lys Pro Gly Ser Ser  
 835 840 845

Ser Ser Asn Ser Leu Leu Tyr Ser Ser Lys Asp Ile Pro Ser Gly Gly  
 850 855 860

Ile Ile Ala Leu Ala Asp Ala Asp Val Pro Thr Ser Gly Ser Lys Ser  
 865 870 875 880

Ala Ala Cys Gly Leu Leu Ala Ser Leu Ala Glu Ala Ser Ser Lys Val  
 885 890 895

His Ser Glu His Gly Val Pro Ala Ser Phe Lys Val Pro Thr Gly Val  
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BCS 04-501-PCT\_SEQUENZPROTOKOLL-Verfahren zur Identifizierung.ST25  
 900 905 910

Val Ile Pro Phe Gly Ser Met Glu Leu Ala Leu Lys Gln Asn Asn Ser  
 915 920 925

Glu Glu Lys Phe Ala Ser Leu Leu Glu Lys Leu Glu Thr Ala Arg Pro  
 930 935 940

Glu Gly Gly Glu Leu Asp Asp Ile Cys Asp Gln Ile His Glu Val Met  
 945 950 955 960

Lys Thr Leu Gln Val Pro Lys Glu Thr Ile Asn Ser Ile Ser Lys Ala  
 965 970 975

Phe Leu Lys Asp Ala Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu  
 980 985 990

Asp Leu Ala Gly Met Ser Ala Ala Gly Leu Tyr Glu Ser Ile Pro Asn  
 995 1000 1005

Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln  
 1010 1015 1020

Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg  
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Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val  
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Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val  
 1055 1060 1065

Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala  
 1070 1075 1080

Pro Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro  
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Trp Arg Leu Ala Ser Gly Lys Leu Asp Gly Ile Val Gln Thr Leu  
 1100 1105 1110

Ala Phe Ala Asn Phe Ser Glu Glu Leu Leu Val Ser Gly Thr Gly  
 1115 1120 1125

Pro Ala Asp Gly Lys Tyr Val Arg Leu Thr Val Asp Tyr Ser Lys  
 1130 1135 1140

Lys Arg Leu Thr Val Asp Ser Val Phe Arg Gln Gln Leu Gly Gln  
 1145 1150 1155

Arg Leu Gly Ser Val Gly Phe Phe Leu Glu Arg Asn Phe Gly Cys

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
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 1175 1180 1185

Val Gln Ser Arg Pro Gln Pro Leu  
 1190 1195

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 Gly Gly Arg Pro Arg Arg Gly Leu Val Leu Pro Pro Pro Gly Val Gly  
 15 20 25

gcg ggt gtg ctg ctc cgc cgg gga gcg atg gcg ctc cct ggg cgg cgc 147  
 Ala Gly Val Leu Leu Arg Arg Gly Ala Met Ala Leu Pro Gly Arg Arg  
 30 35 40 45

ggc ttc gcg tgc cgc ggg aga tcc gcg gcc tcg gcg gca gag aga aca 195  
 Gly Phe Ala Cys Arg Gly Arg Ser Ala Ala Ser Ala Ala Glu Arg Thr  
 50 55 60

aag gag aaa aag aga aga gat tct tca aag cag cca ttg gtg cat ctc 243  
 Lys Glu Lys Lys Arg Arg Asp Ser Ser Lys Gln Pro Leu Val His Leu  
 65 70 75

cag gtt tgt cta gag cac cag gtt aag ttt ggt gag cat gta ggc att 291  
 Gln Val Cys Leu Glu His Gln Val Lys Phe Gly Glu His Val Gly Ile  
 80 85 90

atc ggt tcc aca aag gag ctt ggt tca tgg gag gag cag gtt gaa ctg 339  
 Ile Gly Ser Thr Lys Glu Leu Gly Ser Trp Glu Glu Gln Val Glu Leu  
 95 100 105

gaa tgg act aca aat ggt tgg gtc tgc cag ctt aag ctc cct gga gaa 387  
 Glu Trp Thr Thr Asn Gly Trp Val Cys Gln Leu Lys Leu Pro Gly Glu  
 110 115 120 125

aca ctt gtg gag ttt aaa ttt gtt ata ttt ttg gtg gga gga aaa gat 435  
 Thr Leu Val Glu Phe Lys Phe Val Ile Phe Leu Val Gly Gly Lys Asp  
 130 135 140

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aaa ata tgg gaa gat ggt aat aac cgt gtt gtt gag ctg ccg aag gat 483  
 Lys Ile Trp Glu Asp Gly Asn Asn Arg Val Val Glu Leu Pro Lys Asp  
 145 150 155

ggt aag ttt gat ata gta tgc cac tgg aat aga aca gaa gag cca tta 531  
 Gly Lys Phe Asp Ile Val Cys His Trp Asn Arg Thr Glu Glu Pro Leu  
 160 165 170

gaa ctt tta gga aca cca aag ttt gag ttg gtc gga gaa gct gaa aag 579  
 Glu Leu Leu Gly Thr Pro Lys Phe Glu Leu Val Gly Glu Ala Glu Lys  
 175 180 185

aat act ggc gag gat gct tca gca tct gta act ttt gca cct gaa aaa 627  
 Asn Thr Gly Glu Asp Ala Ser Ala Ser Val Thr Phe Ala Pro Glu Lys  
 190 195 200 205

gtt caa gat att tca gtt gtt gag aat ggt gat cca gca cca gag gcc 675  
 Val Gln Asp Ile Ser Val Val Glu Asn Gly Asp Pro Ala Pro Glu Ala  
 210 215 220

gag tca agc aaa ttt ggt ggg caa tgg caa gga agt aaa act gtt ttc 723  
 Glu Ser Ser Lys Phe Gly Gly Gln Trp Gln Gly Ser Lys Thr Val Phe  
 225 230 235

atg aga tca aat gag cat ctg aat aag gag gct gat agg atg tgg gat 771  
 Met Arg Ser Asn Glu His Leu Asn Lys Glu Ala Asp Arg Met Trp Asp  
 240 245 250

aca act ggg ctt gat gga ata gca ctg aaa ctg gtg gag ggc gat aaa 819  
 Thr Thr Gly Leu Asp Gly Ile Ala Leu Lys Leu Val Glu Gly Asp Lys  
 255 260 265

gca tcc agg aac tgg tgg cgg aag tta gag gtt gtt cgc ggg ata ttg 867  
 Ala Ser Arg Asn Trp Trp Arg Lys Leu Glu Val Val Arg Gly Ile Leu  
 270 275 280 285

tca gaa tct ttt gat gac cag agt cgt ctg ggg gcc ctt gta tac tca 915  
 Ser Glu Ser Phe Asp Asp Gln Ser Arg Leu Gly Ala Leu Val Tyr Ser  
 290 295 300

gct att tat ctg aag tgg att tat aca ggt cag ata tcg tgc ttt gaa 963  
 Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Ser Cys Phe Glu  
 305 310 315

gat ggt ggc cac cat cgg cct aac aaa cat gct gag ata tcg agg caa 1011  
 Asp Gly Gly His His Arg Pro Asn Lys His Ala Glu Ile Ser Arg Gln  
 320 325 330

ata ttc cgt gaa ctt gaa atg atg tat tat ggg aaa acc aca tca gcc 1059  
 Ile Phe Arg Glu Leu Glu Met Met Tyr Tyr Gly Lys Thr Thr Ser Ala  
 335 340 345

aag gat gtt ctc gtg att cgc aaa att cat ccc ttt tta cct tca ttt 1107  
 Lys Asp Val Leu Val Ile Arg Lys Ile His Pro Phe Leu Pro Ser Phe  
 350 355 360 365

aag tca gag ttt aca gcc tct gtc cct cta aca cga att cgt gat att 1155  
 Lys Ser Glu Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg Asp Ile  
 370 375 380

gct cac cgg aat gac atc cca cat gat ctc aag caa gaa atc aag cat 1203  
 Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys His  
 385 390 395

act ata caa aac aaa ctt cat cgt aat gct gga cct gag gat ctt att 1251  
 Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu Ile  
 400 405 410

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gct	aca	gaa	gtc	atg	ctt	gct	agg	att	act	aag	acc	cct	gga	gaa	tac		
Ala	Thr	Glu	Val	Met	Leu	Ala	Arg	Ile	Thr	Lys	Thr	Pro	Gly	Glu	Tyr		
415						420					425						
agt	gaa	aca	ttt	gtt	gaa	caa	ttc	acg	ata	ttt	tat	agc	gaa	cta	aaa		1347
Ser	Glu	Thr	Phe	Val	Glu	Gln	Phe	Thr	Ile	Phe	Tyr	Ser	Glu	Leu	Lys		
430					435					440					445		
gat	ttc	ttc	aat	gct	ggc	agc	cta	ttt	gag	caa	ctg	gag	tcc	atc	aag		1395
Asp	Phe	Phe	Asn	Ala	Gly	Ser	Leu	Phe	Glu	Gln	Leu	Glu	Ser	Ile	Lys		
				450					455					460			
gaa	tct	ctg	aac	gag	tca	ggc	tta	gaa	gtt	ctc	tca	tcc	ttt	gtg	gaa		1443
Glu	Ser	Leu		Glu	Ser	Gly	Leu	Val	Val	Leu	Ser	Ser	Phe	Val	Glu		
			465					470					475				
acc	aaa	agg	agt	ttg	gac	caa	gtg	gat	cat	gca	gaa	gat	ttg	gat	aaa		1491
Thr	Lys	Arg	Ser	Leu	Asp	Gln	Val	Asp	His	Ala	Glu	Asp	Leu	Asp	Lys		
		480					485					490					
aat	gat	acc	att	caa	att	ttg	atg	act	acc	ttg	caa	tca	tta	tct	tct		1539
Asn	Asp	Thr	Ile	Gln	Ile	Leu	Met	Thr	Thr	Leu	Gln	Ser	Leu	Ser	Ser		
		495				500					505						
cta	aga	tcg	gtt	cta	atg	aag	ggc	ctt	gaa	agt	ggc	ctt	aga	aat	gat		1587
Leu	Arg	Ser	Val	Leu	Met	Lys	Gly	Leu	Glu	Ser	Gly	Leu	Arg	Asn	Asp		
510					515					520					525		
gcg	cct	gat	aat	gct	ata	gca	atg	cga	caa	aag	tgg	cgc	ctt	tgt	gaa		1635
Ala	Pro	Asp	Asn	Ala	Ile	Ala	Met	Arg	Gln	Lys	Trp	Arg	Leu	Cys	Glu		
				530					535					540			
att	agt	ctt	gag	gat	tat	tca	ttt	gtt	ctg	tta	agc	aga	ttc	atc	aat		1683
Ile	Ser	Leu	Glu	Asp	Tyr	Ser	Phe	Val	Leu	Leu	Ser	Arg	Phe	Ile	Asn		
			545					550					555				
act	ctt	gaa	gcc	tta	ggt	gga	tca	gct	tca	ctt	gca	aag	gat	gta	gct		1731
Thr	Leu	Glu	Ala	Leu	Gly	Gly	Ser	Ala	Ser	Leu	Ala	Lys	Asp	Val	Ala		
		560				565						570					
aga	aat	act	act	cta	tgg	gat	act	act	ctt	gat	gcc	ctt	gtc	att	ggc		1779
Arg	Asn	Thr	Thr	Leu	Trp	Asp	Thr	Thr	Leu	Asp	Ala	Leu	Val	Ile	Gly		
		575				580					585						
atc	aat	caa	gtt	agc	ttt	tca	ggt	tgg	aaa	aca	gat	gaa	tgt	att	gcc		1827
Ile	Asn	Gln	Val	Ser	Phe	Ser	Gly	Trp	Lys	Thr	Asp	Glu	Cys	Ile	Ala		
590					595					600					605		
ata	ggg	aat	gag	att	ctt	tcc	tgg	aag	caa	aaa	ggt	cta	tct	gaa	agt		1875
Ile	Gly	Asn	Glu	Ile	Leu	Ser	Trp	Lys	Gln	Lys	Gly	Leu	Ser	Glu	Ser		
				610					615					620			
gaa	ggt	tgt	gaa	gat	ggg	aaa	tat	att	tgg	tca	cta	aga	ctt	aaa	gct		1923
Glu	Gly	Cys	Glu	Asp	Gly	Lys	Tyr	Ile	Trp	Ser	Leu	Arg	Leu	Lys	Ala		
			625					630					635				
aca	ctg	gac	aga	gca	cgg	aga	tta	acg	gaa	gag	tac	tct	gaa	gca	ctt		1971
Thr	Leu	Asp	Arg	Ala	Arg	Arg	Leu	Thr	Glu	Glu	Tyr	Ser	Glu	Ala	Leu		
			640				645					650					
ctt	tct	ata	ttc	cct	gaa	aaa	gta	atg	gtt	att	ggg	aaa	gcc	ctt	gga		2019
Leu	Ser	Ile	Phe	Pro	Glu	Lys	Val	Met	Val	Ile	Gly	Lys	Ala	Leu	Gly		
		655				660					665						
ata	cca	gat	aac	agt	gtg	aga	act	tac	aca	gag	gca	gaa	att	cgt	gct		2067
Ile	Pro	Asp	Asn	Ser	Val	Arg	Thr	Tyr	Thr	Glu	Ala	Glu	Ile	Arg	Ala		
670					675					680					685		

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ggc att gtt ttt cag gta tct aaa cta tgc aca gta ctt cag aaa gca																2115
Gly Ile Val Phe Gln Val Ser Lys Leu Cys Thr Val Leu Gln Lys Ala																
				690					695					700		
att cga gaa gta ctt gga tca act ggc tgg gat gtt ctt gtt cct gga																2163
Ile Arg Glu Val Leu Gly Ser Thr Gly Trp Asp Val Leu Val Pro Gly																
			705					710					715			
gtg gcc cat gga act ctg atg cgg gtg gaa aga att ctt cct gga tca																2211
Val Ala His Gly Thr Leu Met Arg Val Glu Arg Ile Leu Pro Gly Ser																
			720				725						730			
tta cct tca tct gtc aaa gaa cct gtg gtt cta att gta gat aag gct																2259
Leu Pro Ser Ser Val Lys Glu Pro Val Val Leu Ile Val Asp Lys Ala																
			735				740						745			
gat gga gat gaa gag gtc aaa gct gct ggg gat aat ata gtt ggt gtt																2307
Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val Gly Val																
			750				755					760				765
att ctt ctt cag gaa cta cct cac ctt tca cat ctt ggt gtt aga gct																2355
Ile Leu Leu Gln Glu Leu Pro His Leu Ser His Leu Gly Val Arg Ala																
			770						775					780		
cgt caa gag aat gtt gta ttt gta act tgt gaa tat gat gac aca gtt																2403
Arg Gln Glu Asn Val Val Phe Val Thr Cys Glu Tyr Asp Asp Thr Val																
			785						790					795		
aca gat gtg tat ttg ctt gag gga aaa tat atc aga tta gaa gca tca																2451
Thr Asp Val Tyr Leu Leu Glu Gly Lys Tyr Ile Arg Leu Glu Ala Ser																
			800						805					810		
tcc atc aat gtc aat ctc tca ata gtt tca gaa aaa aat gac aat gct																2499
Ser Ile Asn Val Asn Leu Ser Ile Val Ser Glu Lys Asn Asp Asn Ala																
			815				820						825			
gtc tct aca gaa cca aat agt aca ggg aat cca ttt caa cag aaa ctc																2547
Val Ser Thr Glu Pro Asn Ser Thr Gly Asn Pro Phe Gln Gln Lys Leu																
			830				835						840			845
caa aat gaa ttc tct cta cca tcg gat atc gag atg cca ctg caa atg																2595
Gln Asn Glu Phe Ser Leu Pro Ser Asp Ile Glu Met Pro Leu Gln Met																
			850						855					860		
tct aag caa aaa agc aaa tca gga gtg aat ggt agt ttt gct gct ctt																2643
Ser Lys Gln Lys Ser Lys Ser Gly Val Asn Gly Ser Phe Ala Ala Leu																
			865						870					875		
gag ctt tca gaa gct tca gtg gaa tca gct ggt gca aaa gct gct gca																2691
Glu Leu Ser Glu Ala Ser Val Glu Ser Ala Gly Ala Lys Ala Ala Ala																
			880						885					890		
tgc aga act ctt tct gtt ctt gct tca ttg tct aat aaa gtc tat agt																2739
Cys Arg Thr Leu Ser Val Leu Ala Ser Leu Ser Asn Lys Val Tyr Ser																
			895				900						905			
gat caa gga gtt cca gca gcc ttt aga gtc cct tct ggt gct gtg ata																2787
Asp Gln Gly Val Pro Ala Ala Phe Arg Val Pro Ser Gly Ala Val Ile																
			910				915						920			925
cca ttt gga tca atg gag gat gcg ctc aag aaa agt gga tca ctg gaa																2835
Pro Phe Gly Ser Met Glu Asp Ala Leu Lys Lys Ser Gly Ser Leu Glu																
			930						935					940		
tcc ttt aca agc ctt cta gaa aag att gaa aca gcc aaa gtc gaa aat																2883
Ser Phe Thr Ser Leu Leu Glu Lys Ile Glu Thr Ala Lys Val Glu Asn																
			945						950					955		

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ggt gaa gtt gat agc ctg gcg ttg gag cta caa gca ata att tca cat																			2931
Gly Glu Val Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His																			
960	965	970																	
ctt tcc cca ccg gag gag act att ata ttt ctc aaa aga atc ttc cca																			2979
Leu Ser Pro Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro																			
975	980	985																	
cag gat gtc cgg ttg att gtt aga tct agt gct aat gtg gag gat ttg																			3027
Gln Asp Val Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu Asp Leu																			
990	995	1000	1005																
gct ggt atg tca gct gct ggt ctc tat gat tca att ccc aat gtc																			3072
Ala Gly Met Ser Ala Ala Gly Leu Tyr Asp Ser Ile Pro Asn Val																			
1010	1015	1020																	
agt ctc atg gac cca tgt gcc ttt gga gct gcg gtt ggg aag gtt																			3117
Ser Leu Met Asp Pro Cys Ala Phe Gly Ala Val Gly Lys Val																			
1025	1030	1035																	
tgg gct tct tta tac aca agg aga gcc atc cta agc cgt cga gcc																			3162
Trp Ala Ser Leu Tyr Thr Arg Arg Ala Ile Leu Ser Arg Arg Ala																			
1040	1045	1050																	
gct ggt gtt tat cag aga gac gcg aca atg gct gtt ctt gtc caa																			3207
Ala Gly Val Tyr Gln Arg Asp Ala Thr Met Ala Val Leu Val Gln																			
1055	1060	1065																	
gaa ata ctg cag cca gat ctc tcc ttc gtg ctt cat act gtt tgc																			3252
Glu Ile Leu Gln Pro Asp Leu Ser Phe Val Leu His Thr Val Cys																			
1070	1075	1080																	
ccc gct gac cat gac ccc aag gtt gtc cag gct gag gtc gcc cct																			3297
Pro Ala Asp His Asp Pro Lys Val Val Gln Ala Glu Val Ala Pro																			
1085	1090	1095																	
ggg ctg ggt gaa acg ctt gct tca gga acc cgt ggc acc ccg tgg																			3342
Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro Trp																			
1100	1105	1110																	
agg ctg tca tgt aac aaa ttc gat gga aaa gtt gcc act ctt gcc																			3387
Arg Leu Ser Cys Asn Lys Phe Asp Gly Lys Val Ala Thr Leu Ala																			
1115	1120	1125																	
ttt tca aat ttc agt gag gag atg gtg gtg cac aac tct ggt cct																			3432
Phe Ser Asn Phe Ser Glu Glu Met Val Val His Asn Ser Gly Pro																			
1130	1135	1140																	
gcc aat gga gaa gta att cgt ctt act gtt gat tac agc aag aag																			3477
Ala Asn Gly Glu Val Ile Arg Leu Thr Val Asp Tyr Ser Lys Lys																			
1145	1150	1155																	
cca ttg tcg gtt gat aca acc ttt agg aag cag ttt ggt cag cga																			3522
Pro Leu Ser Val Asp Thr Thr Phe Arg Lys Gln Phe Gly Gln Arg																			
1160	1165	1170																	
ctg gct gcg att ggc cag tat ctg gag cag aag ttc ggg agt gca																			3567
Leu Ala Ala Ile Gly Gln Tyr Leu Glu Gln Lys Phe Gly Ser Ala																			
1175	1180	1185																	
cag gat gtg gaa ggt tgc ctg gtt ggg aaa gat att ttt ata gtg																			3612
Gln Asp Val Glu Gly Cys Leu Val Gly Lys Asp Ile Phe Ile Val																			
1190	1195	1200																	
caa agc agg cca cag cca tag aagccgaatt c																			3644
Gln Ser Arg Pro Gln Pro																			
1205																			

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&lt;210&gt; 4

&lt;211&gt; 1206

&lt;212&gt; PRT

&lt;213&gt; Oryza sativa

&lt;400&gt; 4

Met Thr Ser Leu Arg Pro Leu Glu Thr Ser Leu Ser Ile Gly Gly Arg  
 1 5 10 15

Pro Arg Arg Gly Leu Val Leu Pro Pro Pro Gly Val Gly Ala Gly Val  
 20 25 30

Leu Leu Arg Arg Gly Ala Met Ala Leu Pro Gly Arg Arg Gly Phe Ala  
 35 40 45

Cys Arg Gly Arg Ser Ala Ala Ser Ala Ala Glu Arg Thr Lys Glu Lys  
 50 55 60

Lys Arg Arg Asp Ser Ser Lys Gln Pro Leu Val His Leu Gln Val Cys  
 65 70 75 80

Leu Glu His Gln Val Lys Phe Gly Glu His Val Gly Ile Ile Gly Ser  
 85 90 95

Thr Lys Glu Leu Gly Ser Trp Glu Glu Gln Val Glu Leu Glu Trp Thr  
 100 105 110

Thr Asn Gly Trp Val Cys Gln Leu Lys Leu Pro Gly Glu Thr Leu Val  
 115 120 125

Glu Phe Lys Phe Val Ile Phe Leu Val Gly Gly Lys Asp Lys Ile Trp  
 130 135 140

Glu Asp Gly Asn Asn Arg Val Val Glu Leu Pro Lys Asp Gly Lys Phe  
 145 150 155 160

Asp Ile Val Cys His Trp Asn Arg Thr Glu Glu Pro Leu Glu Leu Leu  
 165 170 175

Gly Thr Pro Lys Phe Glu Leu Val Gly Glu Ala Glu Lys Asn Thr Gly  
 180 185 190

Glu Asp Ala Ser Ala Ser Val Thr Phe Ala Pro Glu Lys Val Gln Asp  
 195 200 205

Ile Ser Val Val Glu Asn Gly Asp Pro Ala Pro Glu Ala Glu Ser Ser  
 210 215 220



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Lys Phe Gly Gly Gln Trp Gln Gly Ser Lys Thr Val Phe Met Arg Ser  
225 230 235 240

Asn Glu His Leu Asn Lys Glu Ala Asp Arg Met Trp Asp Thr Thr Gly  
245 250 255

Leu Asp Gly Ile Ala Leu Lys Leu Val Glu Gly Asp Lys Ala Ser Arg  
260 265 270

Asn Trp Trp Arg Lys Leu Glu Val Val Arg Gly Ile Leu Ser Glu Ser  
275 280 285

Phe Asp Asp Gln Ser Arg Leu Gly Ala Leu Val Tyr Ser Ala Ile Tyr  
290 295 300

Leu Lys Trp Ile Tyr Thr Gly Gln Ile Ser Cys Phe Glu Asp Gly Gly  
305 310 315 320

His His Arg Pro Asn Lys His Ala Glu Ile Ser Arg Gln Ile Phe Arg  
325 330 335

Glu Leu Glu Met Met Tyr Tyr Gly Lys Thr Thr Ser Ala Lys Asp Val  
340 345 350

Leu Val Ile Arg Lys Ile His Pro Phe Leu Pro Ser Phe Lys Ser Glu  
355 360 365

Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg Asp Ile Ala His Arg  
370 375 380

Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile Lys His Thr Ile Gln  
385 390 395 400

Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp Leu Ile Ala Thr Glu  
405 410 415

Val Met Leu Ala Arg Ile Thr Lys Thr Pro Gly Glu Tyr Ser Glu Thr  
420 425 430

Phe Val Glu Gln Phe Thr Ile Phe Tyr Ser Glu Leu Lys Asp Phe Phe  
435 440 445

Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys Glu Ser Leu  
450 455 460

Asn Glu Ser Gly Leu Glu Val Leu Ser Ser Phe Val Glu Thr Lys Arg  
465 470 475 480

Ser Leu Asp Gln Val Asp His Ala Glu Asp Leu Asp Lys Asn Asp Thr  
485 490 495

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Ile Gln Ile Leu Met Thr Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser  
                   500                                  505                                  510

Val Leu Met Lys Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Pro Asp  
                   515                                  520                                  525

Asn Ala Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Ser Leu  
                   530                                  535                                  540

Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Phe Ile Asn Thr Leu Glu  
                   545                                  550                                  555                                  560

Ala Leu Gly Gly Ser Ala Ser Leu Ala Lys Asp Val Ala Arg Asn Thr  
                                   565                                  570                                  575

Thr Leu Trp Asp Thr Thr Leu Asp Ala Leu Val Ile Gly Ile Asn Gln  
                                   580                                  585                                  590

Val Ser Phe Ser Gly Trp Lys Thr Asp Glu Cys Ile Ala Ile Gly Asn  
                   595                                  600                                  605

Glu Ile Leu Ser Trp Lys Gln Lys Gly Leu Ser Glu Ser Glu Gly Cys  
                   610                                  615                                  620

Glu Asp Gly Lys Tyr Ile Trp Ser Leu Arg Leu Lys Ala Thr Leu Asp  
                   625                                  630                                  635                                  640

Arg Ala Arg Arg Leu Thr Glu Glu Tyr Ser Glu Ala Leu Leu Ser Ile  
                                   645                                  650                                  655

Phe Pro Glu Lys Val Met Val Ile Gly Lys Ala Leu Gly Ile Pro Asp  
                   660                                  665                                  670

Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile Arg Ala Gly Ile Val  
                   675                                  680                                  685

Phe Gln Val Ser Lys Leu Cys Thr Val Leu Gln Lys Ala Ile Arg Glu  
                   690                                  695                                  700

Val Leu Gly Ser Thr Gly Trp Asp Val Leu Val Pro Gly Val Ala His  
                   705                                  710                                  715                                  720

Gly Thr Leu Met Arg Val Glu Arg Ile Leu Pro Gly Ser Leu Pro Ser  
                                   725                                  730                                  735

Ser Val Lys Glu Pro Val Val Leu Ile Val Asp Lys Ala Asp Gly Asp  
                   740                                  745                                  750

Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val Gly Val Ile Leu Leu  
                   755                                  760                                  765

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Gln Glu Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg Gln Glu  
 770 775 780

Asn Val Val Phe Val Thr Cys Glu Tyr Asp Asp Thr Val Thr Asp Val  
 785 790 795 800

Tyr Leu Leu Glu Gly Lys Tyr Ile Arg Leu Glu Ala Ser Ser Ile Asn  
 805 810 815

Val Asn Leu Ser Ile Val Ser Glu Lys Asn Asp Asn Ala Val Ser Thr  
 820 825 830

Glu Pro Asn Ser Thr Gly Asn Pro Phe Gln Gln Lys Leu Gln Asn Glu  
 835 840 845

Phe Ser Leu Pro Ser Asp Ile Glu Met Pro Leu Gln Met Ser Lys Gln  
 850 855 860

Lys Ser Lys Ser Gly Val Asn Gly Ser Phe Ala Ala Leu Glu Leu Ser  
 865 870 875 880

Glu Ala Ser Val Glu Ser Ala Gly Ala Lys Ala Ala Ala Cys Arg Thr  
 885 890 895

Leu Ser Val Leu Ala Ser Leu Ser Asn Lys Val Tyr Ser Asp Gln Gly  
 900 905 910

Val Pro Ala Ala Phe Arg Val Pro Ser Gly Ala Val Ile Pro Phe Gly  
 915 920 925

Ser Met Glu Asp Ala Leu Lys Lys Ser Gly Ser Leu Glu Ser Phe Thr  
 930 935 940

Ser Leu Leu Glu Lys Ile Glu Thr Ala Lys Val Glu Asn Gly Glu Val  
 945 950 955 960

Asp Ser Leu Ala Leu Glu Leu Gln Ala Ile Ile Ser His Leu Ser Pro  
 965 970 975

Pro Glu Glu Thr Ile Ile Phe Leu Lys Arg Ile Phe Pro Gln Asp Val  
 980 985 990

Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu Asp Leu Ala Gly Met  
 995 1000 1005

Ser Ala Ala Gly Leu Tyr Asp Ser Ile Pro Asn Val Ser Leu Met  
 1010 1015 1020

Asp Pro Cys Ala Phe Gly Ala Ala Val Gly Lys Val Trp Ala Ser  
 1025 1030 1035

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Leu Tyr Thr Arg Arg Ala Ile Leu Ser Arg Arg Ala Ala Gly Val  
 1040 1045 1050

Tyr Gln Arg Asp Ala Thr Met Ala Val Leu Val Gln Glu Ile Leu  
 1055 1060 1065

Gln Pro Asp Leu Ser Phe Val Leu His Thr Val Cys Pro Ala Asp  
 1070 1075 1080

His Asp Pro Lys Val Val Gln Ala Glu Val Ala Pro Gly Leu Gly  
 1085 1090 1095

Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro Trp Arg Leu Ser  
 1100 1105 1110

Cys Asn Lys Phe Asp Gly Lys Val Ala Thr Leu Ala Phe Ser Asn  
 1115 1120 1125

Phe Ser Glu Glu Met Val Val His Asn Ser Gly Pro Ala Asn Gly  
 1130 1135 1140

Glu Val Ile Arg Leu Thr Val Asp Tyr Ser Lys Lys Pro Leu Ser  
 1145 1150 1155

Val Asp Thr Thr Phe Arg Lys Gln Phe Gly Gln Arg Leu Ala Ala  
 1160 1165 1170

Ile Gly Gln Tyr Leu Glu Gln Lys Phe Gly Ser Ala Gln Asp Val  
 1175 1180 1185

Glu Gly Cys Leu Val Gly Lys Asp Ile Phe Ile Val Gln Ser Arg  
 1190 1195 1200

Pro Gln Pro  
 1205

<210> 5

<211> 12

<212> PRT

<213> Oryza sativa, Arabidopsis thaliana, Sorghum bicolor

<400> 5

Leu Pro His Leu Ser His Leu Gly Val Arg Ala Arg  
 1 5 10

<210> 6

<211> 7

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 6

Ser Arg Arg Val Ala Gly Val  
1 5

&lt;210&gt; 7

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 7

Val Glu Ala Glu Val Ala Pro  
1 5

&lt;210&gt; 8

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 8

His Thr Val Ser Pro Ser Asp His Asp  
1 5

&lt;210&gt; 9

&lt;211&gt; 807

&lt;212&gt; DNA

&lt;213&gt; Hordeum vulgare

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (3)..(590)

&lt;223&gt;

&lt;400&gt; 9

cg gca cga gga gtc ctc ccc aat gtg agc ctc tcg gac cca acc aac  
Ala Arg Gly Val Leu Pro Asn Val Ser Leu Ser Asp Pro Thr Asn

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

1	5	10	15	
ttc ggg tct gca gta gcg cgg gtc tgg gcc tcg ctg tac act cgg agg				95
Phe Gly Ser Ala Val Ala Arg Val Trp Ala Ser Leu Tyr Thr Arg Arg	20	25	30	
gcc atc ctc agc cgc cgg gtg gct ggc gtg ccc cag agg gac gcc aag				143
Ala Ile Leu Ser Arg Arg Val Ala Gly Val Pro Gln Arg Asp Ala Lys	35	40	45	
atg gct gtc ctg gtg cag gag atg ctg gag cca gag cta tcc ttc gtg				191
Met Ala Val Leu Val Gln Glu Met Leu Glu Pro Glu Leu Ser Phe Val	50	55	60	
ctc cac acg gtc agc ccc tcg gac cac gac acc agg gtc gtc gag gct				239
Leu His Thr Val Ser Pro Ser Asp His Asp Thr Arg Val Val Glu Ala	65	70	75	
gag gtt gcc ccg ggg ctg ggc gag acc ctt gcc gct ggc acc cgc ggc				287
Glu Val Ala Pro Gly Leu Gly Glu Thr Leu Ala Ala Gly Thr Arg Gly	80	85	90	95
acc ccg tgg cgt ctc tcc tgc gac aag ttc gac acc gac gtc gcc acc				335
Thr Pro Trp Arg Leu Ser Cys Asp Lys Phe Asp Thr Asp Val Ala Thr	100	105	110	
ctg gcc ttc gcc aac ttc agt gag gag atg cgg gtg ctc ggc tcg ggc				383
Leu Ala Phe Ala Asn Phe Ser Glu Glu Met Arg Val Leu Gly Ser Gly	115	120	125	
ccc gcc gac ggc gag gtg gtg agg ctc act gtc gac tac agc acg aag				431
Pro Ala Asp Gly Glu Val Val Arg Leu Thr Val Asp Tyr Ser Thr Lys	130	135	140	
ctg ctc tcc gtc gac agg acc ttc agg cag aag ttc ggt cag cgg ctg				479
Leu Leu Ser Val Asp Arg Thr Phe Arg Gln Lys Phe Gly Gln Arg Leu	145	150	155	
gcc gcc gtg ggg cag tac ctg gag cag agg ttc ggg agc gcc cag gac				527
Ala Ala Val Gly Gln Tyr Leu Glu Gln Arg Phe Gly Ser Ala Gln Asp	160	165	170	175
gtg gag ggc tgc atg gtc tgg gaa gac atc tac ata gtg cag agc atg				575
Val Glu Gly Cys Met Val Trp Glu Asp Ile Tyr Ile Val Gln Ser Met	180	185	190	
cca caa ccg ctg tag agtcatccgt aataatgttt agatgagcaa agttttggtt				630
Pro Gln Pro Leu	195			
ggtgaaataa aatttgccga aaatcccatg gcaaaataag tcaggtatga agagcccgcc				690
tgcgaaacca actgattcta aataatgttt tgaattcgtg tttaaattat gggacgtgaa				750
caatgatttc cttggaatgc atgcattgta agtttttaaaa aaaaaaaaaa aaaaaaa				807

&lt;210&gt; 10

&lt;211&gt; 195

&lt;212&gt; PRT

&lt;213&gt; Hordeum vulgare

&lt;400&gt; 10

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Ala Arg Gly Val Leu Pro Asn Val Ser Leu Ser Asp Pro Thr Asn Phe  
 1 5 10 15

Gly Ser Ala Val Ala Arg Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala  
 20 25 30

Ile Leu Ser Arg Arg Val Ala Gly Val Pro Gln Arg Asp Ala Lys Met  
 35 40 45

Ala Val Leu Val Gln Glu Met Leu Glu Pro Glu Leu Ser Phe Val Leu  
 50 55 60

His Thr Val Ser Pro Ser Asp His Asp Thr Arg Val Val Glu Ala Glu  
 65 70 75 80

Val Ala Pro Gly Leu Gly Glu Thr Leu Ala Ala Gly Thr Arg Gly Thr  
 85 90 95

Pro Trp Arg Leu Ser Cys Asp Lys Phe Asp Thr Asp Val Ala Thr Leu  
 100 105 110

Ala Phe Ala Asn Phe Ser Glu Glu Met Arg Val Leu Gly Ser Gly Pro  
 115 120 125

Ala Asp Gly Glu Val Val Arg Leu Thr Val Asp Tyr Ser Thr Lys Leu  
 130 135 140

Leu Ser Val Asp Arg Thr Phe Arg Gln Lys Phe Gly Gln Arg Leu Ala  
 145 150 155 160

Ala Val Gly Gln Tyr Leu Glu Gln Arg Phe Gly Ser Ala Gln Asp Val  
 165 170 175

Glu Gly Cys Met Val Trp Glu Asp Ile Tyr Ile Val Gln Ser Met Pro  
 180 185 190

Gln Pro Leu  
 195

<210> 11

<211> 9

<212> PRT

<213> solanum tuberosum

<400> 11

Pro Glu Glu Cys Lys Ala Val Gly Asn  
 1 5

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;210&gt; 12

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 12

Thr Glu Glu Tyr Ser Glu Thr  
1 5

&lt;210&gt; 13

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 13

Arg Phe Val Asn Ala Val Glu  
1 5

&lt;210&gt; 14

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Solanum tuberosum

&lt;400&gt; 14

Glu Gly Ser Glu Asp Gly Lys  
1 5

&lt;210&gt; 15

&lt;211&gt; 403

&lt;212&gt; DNA

&lt;213&gt; Solanum tuberosum

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(402)

&lt;223&gt;



## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

<400> 15  
 gcg gat gct tca ata gct atg cgt cag aag tgg cgt ctc tgc gaa atc 48  
 Ala Asp Ala Ser Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile  
 1 5 10 15

ggg ctt gaa gac tat gca ttt gtt ctt ttg agc agg ttt gtg aat gca 96  
 Gly Leu Glu Asp Tyr Ala Phe Val Leu Leu Ser Arg Phe Val Asn Ala  
 20 25 30

gtt gaa gct cta ggc gga gct gat tgg ctt gca gag aat gta aca gtg 144  
 Val Glu Ala Leu Gly Gly Ala Asp Trp Leu Ala Glu Asn Val Thr Val  
 35 40 45

aaa aac att agt tct tgg aat gat cca att gga gca ctt aca gtt gga 192  
 Lys Asn Ile Ser Ser Trp Asn Asp Pro Ile Gly Ala Leu Thr Val Gly  
 50 55 60

atc caa cag cta ggt ata tct ggt tgg aag ccc gag gaa tgc aaa gct 240  
 Ile Gln Gln Leu Gly Ile Ser Gly Trp Lys Pro Glu Glu Cys Lys Ala  
 65 70 75 80

gtt gga aat gaa ctt ttg tca tgg aaa gaa agg ggt att tca gaa att 288  
 Val Gly Asn Glu Leu Leu Ser Trp Lys Glu Arg Gly Ile Ser Glu Ile  
 85 90 95

gaa ggc agc gaa gat ggt aag act ata tgg gca tta aga cta aaa gcg 336  
 Glu Gly Ser Glu Asp Gly Lys Thr Ile Trp Ala Leu Arg Leu Lys Ala  
 100 105 110

act ctt gat aga agt cga agg tta act gag gag tat tcc gag aca ctt 384  
 Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu Thr Leu  
 115 120 125

ctc caa ata ttc cct gaa a 403  
 Leu Gln Ile Phe Pro Glu  
 130

<210> 16

<211> 134

<212> PRT

<213> Solanum tuberosum

<400> 16

Ala Asp Ala Ser Ile Ala Met Arg Gln Lys Trp Arg Leu Cys Glu Ile  
 1 5 10 15

Gly Leu Glu Asp Tyr Ala Phe Val Leu Leu Ser Arg Phe Val Asn Ala  
 20 25 30

Val Glu Ala Leu Gly Gly Ala Asp Trp Leu Ala Glu Asn Val Thr Val  
 35 40 45

Lys Asn Ile Ser Ser Trp Asn Asp Pro Ile Gly Ala Leu Thr Val Gly  
 50 55 60

Ile Gln Gln Leu Gly Ile Ser Gly Trp Lys Pro Glu Glu Cys Lys Ala

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25  
 65 70 75 80

Val Gly Asn Glu Leu Leu Ser Trp Lys Glu Arg Gly Ile Ser Glu Ile  
 85 90 95

Glu Gly Ser Glu Asp Gly Lys Thr Ile Trp Ala Leu Arg Leu Lys Ala  
 100 105 110

Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu Thr Leu  
 115 120 125

Leu Gln Ile Phe Pro Glu  
 130

<210> 17

<211> 7

<212> PRT

<213> Sorghum bicolor

<400> 17

Asp Gly Gly His His Arg Pro  
 1 5

<210> 18

<211> 8

<212> PRT

<213> Sorghum bicolor

<400> 18

Asp Ala Pro Asp Ser Ala Ile Ala  
 1 5

<210> 19

<211> 9

<212> PRT

<213> Sorghum bicolor

<400> 19

Ile Pro Glu Asn Ser Val Arg Thr Tyr  
 1 5

<210> 20

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Sorghum bicolor

&lt;400&gt; 20

Val Asn Lys Ala Asp Gly  
1 5

&lt;210&gt; 21

&lt;211&gt; 1526

&lt;212&gt; DNA

&lt;213&gt; Sorghum bicolor

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (2)..(1525)

&lt;223&gt;

&lt;400&gt; 21

g cac gag gct gaa tat gtt cat gat cag agt cac ctg gag gct ctt aca	49
His Glu Ala Glu Tyr Val His Asp Gln Ser His Leu Glu Ala Leu Thr	
1 5 10 15	
tat tct gca ata tat cta aag tgg ata tat act ggt caa ata cca tgc	97
Tyr Ser Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Pro Cys	
20 25 30	
ttt gag gat ggt ggt cac cat cga ccc aat aaa cat gct gag ata tcc	145
Phe Glu Asp Gly Gly His His Arg Pro Asn Lys His Ala Glu Ile Ser	
35 40 45	
agg caa att ttt cgt gaa att gaa agg ata tac tat ggg gaa aac aca	193
Arg Gln Ile Phe Arg Glu Ile Glu Arg Ile Tyr Tyr Gly Glu Asn Thr	
50 55 60	
tca gct cag gat ttg ctt gtg ata cgc aag att cat cct tgt cta cct	241
Ser Ala Gln Asp Leu Leu Val Ile Arg Lys Ile His Pro Cys Leu Pro	
65 70 75 80	
tca ttt aaa tca gaa ttt act gcc tct gtt cct cta aca cga att cgt	289
Ser Phe Lys Ser Glu Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg	
85 90 95	
gat att gct cat cgt aat gac ata cca cat gat ctc aag caa gaa atc	337
Asp Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile	
100 105 110	
aag cat act ata caa aac aag ctt cac cgg aat gcc ggc cct gag gat	385
Lys His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp	
115 120 125	

BCS 04-501-PCT_SEQUENZPROTOKOLL_Verfahren zur Identifizierung.ST25	
ctt att gct act gaa gcc atg ctt gct agg att act aag act cct gga Leu Ile Ala Thr Glu Ala Met Leu Ala Arg Ile Thr Lys Thr Pro Gly 130 135 140	433
gag tac agt gaa gct ttt gtt gaa caa ttc aag acg ttt tat agt gaa Glu Tyr Ser Glu Ala Phe Val Glu Gln Phe Lys Thr Phe Tyr Ser Glu 145 150 155 160	481
tta aaa gat ttc ttc aat gct ggc agc cta ctg gag caa gtg caa tcc Leu Lys Asp Phe Phe Asn Ala Gly Ser Leu Leu Glu Gln Val Gln Ser 165 170 175	529
atc gag caa tct ttg gat gag tct ggc tta gaa gct ctc tca tcc ttt Ile Glu Gln Ser Leu Asp Glu Ser Gly Leu Glu Ala Leu Ser Ser Phe 180 185 190	577
ctg aaa acc aaa aag aat tta gac caa ctg gaa gat gca aaa gat ttg Leu Lys Thr Lys Lys Asn Leu Asp Gln Leu Glu Asp Ala Lys Asp Leu 195 200 205	625
gat gaa aat ggt ggc gtt caa gtt ttg ttg aaa gcc ttg ctg tcg tta Asp Glu Asn Gly Gly Val Gln Val Leu Leu Lys Ala Leu Leu Ser Leu 210 215 220	673
tct tat cta aga tca att cta atg aag ggt ctg gaa agt ggc ctt aga Ser Tyr Leu Arg Ser Ile Leu Met Lys Gly Leu Glu Ser Gly Leu Arg 225 230 235 240	721
aat gat gct cca gat agt gct att gca atg cga caa aag tgg cgt ctt Asn Asp Ala Pro Asp Ser Ala Ile Ala Met Arg Gln Lys Trp Arg Leu 245 250 255	769
tgt gag atc ggg ctt gaa gat tat tcg ttt gta ttg tta agt aga tac Cys Glu Ile Gly Leu Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Tyr 260 265 270	817
atc aat gct ctt gaa gct ttg ggt gga tca gct tca ctt gca gag ggt Ile Asn Ala Leu Glu Ala Leu Gly Gly Ser Ala Ser Leu Ala Glu Gly 275 280 285	865
ctt cct aca aat aca agt cta tgg gat gat gcc ctt gat gcc ctt gtc Leu Pro Thr Asn Thr Ser Leu Trp Asp Asp Ala Leu Asp Ala Leu Val 290 295 300	913
att ggc ata aat caa gtt agc ttt tca gga tgg aaa cca aat gag tgt Ile Gly Ile Asn Gln Val Ser Phe Ser Gly Trp Lys Pro Asn Glu Cys 305 310 315 320	961
act gca ata gtg aat gag ctt ctt tct tgg aag cag aaa ggt cta tct Thr Ala Ile Val Asn Glu Leu Leu Ser Trp Lys Gln Lys Gly Leu Ser 325 330 335	1009
gaa ttt gaa ggc agt gag gat gga aag tat att tgg gca ctg aga ctc Glu Phe Glu Gly Ser Glu Asp Gly Lys Tyr Ile Trp Ala Leu Arg Leu 340 345 350	1057
aaa gcc act ctt gat aga tca cga aga cta aca gaa gaa tac tct gaa Lys Ala Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu 355 360 365	1105
gca ctt ctt tct ata ttt cct gaa aaa gtc aag gtt ctt ggg aaa gcc Ala Leu Leu Ser Ile Phe Pro Glu Lys Val Lys Val Leu Gly Lys Ala 370 375 380	1153
ctt gga ata cca gag aac agt gtg aga aca tac act gaa gct gaa att Leu Gly Ile Pro Glu Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile 385 390 395 400	1201

BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

cgt gct ggt gtt att ttt cac gtc tcg aaa ctt tgc act gta ctt tta 1249  
 Arg Ala Gly Val Ile Phe His Val Ser Lys Leu Cys Thr Val Leu Leu 415

aaa gca act cga gca gtt ctt gga tcg tct gtg tgg gat gtt ctt gtt 1297  
 Lys Ala Thr Arg Ala Val Leu Gly Ser Ser Val Trp Asp Val Leu Val 430

cct gga gtg gcc cat gga gcc ttg ata cag gtt gaa aga ata gct cct 1345  
 Pro Gly Val Ala His Gly Ala Leu Ile Gln Val Glu Arg Ile Ala Pro 445

gga tca ttg cca tca tcc atc aaa gaa cct gtc gtg cta gtt gta aac 1393  
 Gly Ser Leu Pro Ser Ser Ile Lys Glu Pro Val Val Leu Val Val Asn 460

aag gct gat gga gat gaa gag gtc aaa gct gct ggg gat aac ata gtg 1441  
 Lys Ala Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val 480

ggt gtt att ctt cta caa gaa tta cct cac cta tca cat ctt ggt gtt 1489  
 Gly Val Ile Leu Leu Gln Glu Leu Pro His Leu Ser His Leu Gly Val 495

aga gct cgt caa gag aaa gtt gta ttt gta act tgc g 1526  
 Arg Ala Arg Gln Glu Lys Val Val Phe Val Thr Cys 505

&lt;210&gt; 22

&lt;211&gt; 508

&lt;212&gt; PRT

&lt;213&gt; Sorghum bicolor

&lt;400&gt; 22

His Glu Ala Glu Tyr Val His Asp Gln Ser His Leu Glu Ala Leu Thr  
 1 5 10 15

Tyr Ser Ala Ile Tyr Leu Lys Trp Ile Tyr Thr Gly Gln Ile Pro Cys  
 20 25 30

Phe Glu Asp Gly Gly His His Arg Pro Asn Lys His Ala Glu Ile Ser  
 35 40 45

Arg Gln Ile Phe Arg Glu Ile Glu Arg Ile Tyr Tyr Gly Glu Asn Thr  
 50 55 60

Ser Ala Gln Asp Leu Leu Val Ile Arg Lys Ile His Pro Cys Leu Pro  
 65 70 75 80

Ser Phe Lys Ser Glu Phe Thr Ala Ser Val Pro Leu Thr Arg Ile Arg  
 85 90 95

Asp Ile Ala His Arg Asn Asp Ile Pro His Asp Leu Lys Gln Glu Ile  
 100 105 110

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Lys His Thr Ile Gln Asn Lys Leu His Arg Asn Ala Gly Pro Glu Asp  
           115                                  120                                  125

Leu Ile Ala Thr Glu Ala Met Leu Ala Arg Ile Thr Lys Thr Pro Gly  
           130                                  135                                  140

Glu Tyr Ser Glu Ala Phe Val Glu Gln Phe Lys Thr Phe Tyr Ser Glu  
           145                                  150                                  155                                  160

Leu Lys Asp Phe Phe Asn Ala Gly Ser Leu Leu Glu Gln Val Gln Ser  
                                   165                                  170                                  175

Ile Glu Gln Ser Leu Asp Glu Ser Gly Leu Glu Ala Leu Ser Ser Phe  
                                   180                                  185                                  190

Leu Lys Thr Lys Lys Asn Leu Asp Gln Leu Glu Asp Ala Lys Asp Leu  
                                   195                                  200                                  205

Asp Glu Asn Gly Gly Val Gln Val Leu Leu Lys Ala Leu Leu Ser Leu  
           210                                  215                                  220

Ser Tyr Leu Arg Ser Ile Leu Met Lys Gly Leu Glu Ser Gly Leu Arg  
           225                                  230                                  235                                  240

Asn Asp Ala Pro Asp Ser Ala Ile Ala Met Arg Gln Lys Trp Arg Leu  
                                   245                                  250                                  255

Cys Glu Ile Gly Leu Glu Asp Tyr Ser Phe Val Leu Leu Ser Arg Tyr  
                                   260                                  265                                  270

Ile Asn Ala Leu Glu Ala Leu Gly Gly Ser Ala Ser Leu Ala Glu Gly  
                                   275                                  280                                  285

Leu Pro Thr Asn Thr Ser Leu Trp Asp Asp Ala Leu Asp Ala Leu Val  
           290                                  295                                  300

Ile Gly Ile Asn Gln Val Ser Phe Ser Gly Trp Lys Pro Asn Glu Cys  
           305                                  310                                  315                                  320

Thr Ala Ile Val Asn Glu Leu Leu Ser Trp Lys Gln Lys Gly Leu Ser  
                                   325                                  330                                  335

Glu Phe Glu Gly Ser Glu Asp Gly Lys Tyr Ile Trp Ala Leu Arg Leu  
                                   340                                  345                                  350

Lys Ala Thr Leu Asp Arg Ser Arg Arg Leu Thr Glu Glu Tyr Ser Glu  
                                   355                                  360                                  365

Ala Leu Leu Ser Ile Phe Pro Glu Lys Val Lys Val Leu Gly Lys Ala  
           370                                  375                                  380

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

Leu Gly Ile Pro Glu Asn Ser Val Arg Thr Tyr Thr Glu Ala Glu Ile  
 385 390 395 400

Arg Ala Gly Val Ile Phe His Val Ser Lys Leu Cys Thr Val Leu Leu  
 405 410 415

Lys Ala Thr Arg Ala Val Leu Gly Ser Ser Val Trp Asp Val Leu Val  
 420 425 430

Pro Gly Val Ala His Gly Ala Leu Ile Gln Val Glu Arg Ile Ala Pro  
 435 440 445

Gly Ser Leu Pro Ser Ser Ile Lys Glu Pro Val Val Leu Val Val Asn  
 450 455 460

Lys Ala Asp Gly Asp Glu Glu Val Lys Ala Ala Gly Asp Asn Ile Val  
 465 470 475 480

Gly Val Ile Leu Leu Gln Glu Leu Pro His Leu Ser His Leu Gly Val  
 485 490 495

Arg Ala Arg Gln Glu Lys Val Val Phe Val Thr Cys  
 500 505

<210> 23

<211> 8

<212> PRT

<213> Triticum aestivum

<400> 23

Arg Asn Asp Ala Thr Asp Ala Gly  
 1 5

<210> 24

<211> 8

<212> PRT

<213> Triticum aestivum

<400> 24

Gly Asn Thr Ser Val Trp Asp Asp  
 1 5

<210> 25

<211> 509

## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;212&gt; DNA

&lt;213&gt; Triticum aestivum

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(507)

&lt;223&gt;

&lt;400&gt; 25

aat ggc gct ttt gtc gaa caa ttt caa ata ttt tat agc gaa cta aaa	48
Asn Gly Ala Phe Val Glu Gln Phe Gln Ile Phe Tyr Ser Glu Leu Lys	
1 5 10 15	

gac ttc ttt aat gcc ggc agc ctg ttt gaa caa ctg gaa tcc atc aag	96
Asp Phe Phe Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys	
20 25 30	

gaa tct ttg aat gat tct ggc tta gaa gca ctg tca tca ttt gtc aaa	144
Glu Ser Leu Asn Asp Ser Gly Leu Glu Ala Leu Ser Ser Phe Val Lys	
35 40 45	

acc aaa cag agt ttg gac caa gtg gat gct gcg aac att caa gtt gtg	192
Thr Lys Gln Ser Leu Asp Gln Val Asp Ala Ala Asn Ile Gln Val Val	
50 55 60	

atg aag acc ttg cag tca ttg tct tca ttg aga tca gtt cta atg aag	240
Met Lys Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser Val Leu Met Lys	
65 70 75 80	

ggc ctt gaa agt gcc ctt aga aat gat gcg act gat gcc ggt ata gca	288
Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Thr Asp Ala Gly Ile Ala	
85 90 95	

atg cga caa aag tgg cgc ctt tgt gag att ggt ctt gag gat tat tct	336
Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gly Leu Glu Asp Tyr Ser	
100 105 110	

ttt gtt ttg tta agc aga tat atc aat ggt ctt gaa gct tca ggt gga	384
Phe Val Leu Leu Ser Arg Tyr Ile Asn Gly Leu Glu Ala Ser Gly Gly	
115 120 125	

tca gct tca ctt gca caa tgt gtg gct gga aat aca agt gta tgg gac	432
Ser Ala Ser Leu Ala Gln Cys Val Ala Gly Asn Thr Ser Val Trp Asp	
130 135 140	

gat acc ctt gat gcc ctt att att ggc gtc aat caa gtt agc ttt tca	480
Asp Thr Leu Asp Ala Leu Ile Ile Gly Val Asn Gln Val Ser Phe Ser	
145 150 155 160	

ggt tgg aag cca gag gaa tgc att gct at	509
Gly Trp Lys Pro Glu Glu Cys Ile Ala	
165	

&lt;210&gt; 26

&lt;211&gt; 169

&lt;212&gt; PRT



## BCS 04-501-PCT\_SEQUENZPROTOKOLL\_Verfahren zur Identifizierung.ST25

&lt;213&gt; Triticum aestivum

&lt;400&gt; 26

Asn Gly Ala Phe Val Glu Gln Phe Gln Ile Phe Tyr Ser Glu Leu Lys  
 1 5 10 15

Asp Phe Phe Asn Ala Gly Ser Leu Phe Glu Gln Leu Glu Ser Ile Lys  
 20 25 30

Glu Ser Leu Asn Asp Ser Gly Leu Glu Ala Leu Ser Ser Phe Val Lys  
 35 40 45

Thr Lys Gln Ser Leu Asp Gln Val Asp Ala Ala Asn Ile Gln Val Val  
 50 55 60

Met Lys Thr Leu Gln Ser Leu Ser Ser Leu Arg Ser Val Leu Met Lys  
 65 70 75 80

Gly Leu Glu Ser Gly Leu Arg Asn Asp Ala Thr Asp Ala Gly Ile Ala  
 85 90 95

Met Arg Gln Lys Trp Arg Leu Cys Glu Ile Gly Leu Glu Asp Tyr Ser  
 100 105 110

Phe Val Leu Leu Ser Arg Tyr Ile Asn Gly Leu Glu Ala Ser Gly Gly  
 115 120 125

Ser Ala Ser Leu Ala Gln Cys Val Ala Gly Asn Thr Ser Val Trp Asp  
 130 135 140

Asp Thr Leu Asp Ala Leu Ile Ile Gly Val Asn Gln Val Ser Phe Ser  
 145 150 155 160

Gly Trp Lys Pro Glu Glu Cys Ile Ala  
 165